Vector Animation: Web-Based Software Training On Demand

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The Customer Integrated Services Group of the Advanced Mission Operations Section, Information Technologies and Software Systems Division at the Jet Propulsion Laboratory, is currently developing vector animations for use in training the mission flight teams and remote science investigators to use our internally-developed mission software.

Training is most effective when it is willingly consumed by users for immediate application to their tasks. Vector Animations (in this case Flash movies) give engineers the opportunity to "use" our subsystems' graphical user interfaces in a safe environment by simulating GUI operation and "invoking" nested applications as the actual software would. There is no delay between actions, the user chooses a path and can change direction or return instantly. Flash movies can easily branch off to other aspects of system operation; for instance, additional scenarios demonstrate system abilities and include optional methods for accomplishing specific system tasks.

The internet is a great tool, but it can be a time-consuming quest if answers are buried in a maze of nested text objects and users cannot guess the proper keywords. Flash movies are perfect vehicles for delivering training across the internet and they present it in a format that it is easy and enjoyable to use.

Action-oriented Flash movies are very powerful, small, and quick to load. Because the player is already "plugged" into the browser, the code that runs the movie is already resident on each machine; only the content is downloaded to the user. During the development of a Flash movie, images (or partial images) may be used many times but they are downloaded to the user only once.

When employees select a Flash movie, they adopt their own pace, digesting information at an ideal rate for their learning style. Processes are precisely displayed in pictures or sequential flows using limited animation and simple navigation techniques . An on-line training module can be called up from a browser window for immediate usage (on-demand) while the user is operating the real software in another window.

To assess user interest in on-line animated training, a demonstration was made available to a small user population. The number of web site hits increased dramatically, some returning frequently to check on updates. One mission has requested this type of training for their remote science community.

Flash technology is relatively low cost, highly productive, easily modified and maintained, and best of all...deliverable via our intranet. The newer browsers already contain the required player for many operating systems (at this time a Solaris solution is available, but unsupported), and the Flash program itself generates the html driver. Flash movies offer tremendous potential for increased productivity. We have only begun to identify its possibilities.